

Section 7 Construction Component

7.0 Overview

This section discusses Permit requirements that apply to the Construction Component of the JURMP and what activities the City of Carlsbad proposes for compliance with Order 2001-01 (Permit). This section meets or exceeds minimum requirements as specified in Section H and Section F.2.a. of the Permit. This Section addresses short- and long-term impacts from urban runoff at construction sites and how the City of Carlsbad will minimize those impacts on receiving water quality:

- Pollution Prevention (Section 7.1)
- Grading Ordinance Update (Section 7.2)
- Modify Construction and Grading Approval Process (Section 7.3)
- Source Identification (Section 7.4)
- Threat to Water Quality Prioritization (Section 7.5)
- Best Management Practices Implementation (Section 7.6)
- Inspection of Construction Sites (Section 7.7)
- Enforcement of Construction Sites (Section 7.8)
- Reporting of Non-compliant Sites (Section 7.9)
- Education on Construction Activities (Section 7.10)

Subsections 7.1 through 7.10 use a table format to briefly summarize the purpose of the Subsection, quote the applicable regulatory requirements from Section F and H of the Permit (written in *italics*), and list the City's action plan to meet the regulatory requirements. The remainder of the Subsection outlines in detail each action and describes the specific actions that have been completed, are in progress, or are projected by the City of Carlsbad to meet or exceed that Permit requirement.

Where appropriate, the City of Carlsbad proposes a performance goal as a percentage to be completed within a Permit Year or the five-year Permit term. Although the City strives for 100% completion of actions, a performance goal of 90% for the high priority construction inspections; BMP implementation reviews; corrective actions; enforcement; and reporting requirements is expected to meet the intended requirements of Order 2001-01. Performance goals are used to assess the completeness of a JURMP Component and assess the effectiveness of implementing action plans.

The types of information collected for use in preparing the Annual Report and Assessment/Evaluation of the JURMP is outlined in Section 11 of this JURMP, Assessment of Jurisdictional URMP Effectiveness Component.

7.1 Pollution Prevention

7.1.1 Purpose and Permit Requirements

Purpose	The purpose of this Permit requirement is to identify opportunities to use pollution prevention at construction sites to reduce the potential release of pollutants to storm drains.
NPDES Permit Order No. 2001- 01 Requirement(s)	<p>The Permit requirement under the Construction Component for Pollution Prevention is as follows:</p> <p>Section F.2.a <i>Each Copermantee shall implement pollution prevention methods in its Construction Component and shall require its use by construction site owners, developers, contractors, and other responsible parties, where appropriate.</i></p>
Jurisdictional URMP Requirements	<p>The Permit requirement under the Construction Component for Pollution Prevention is as follows:</p> <p>Section H.1.a.(1)(a) <i>Which pollution prevention methods will be required for implementation, and how and where they will be required.</i></p>
City Action Plan	<ol style="list-style-type: none">1) Identify pollution prevention methods for implementation.2) Define the list of options on how the pollution prevention methods will be implemented and how the pollution prevention methods will be required.

7.1.2 Pollution Prevention Actions

Action #1 - Identify pollution prevention methods for implementation

There are four key components to a pollution prevention regimen and a fifth component added for storm water. Implementing the following five “Rs” will assist in identifying the pollution prevention opportunities for municipalities. The definitions of these terms are as follows:

- Reduce – BEFORE generating a waste stream, minimize the quantity or toxicity of the waste by substituting nontoxic chemicals.
- Reuse – Material, unwanted in one area, may be used for its intended purpose in another area.
- Recycle – Take used materials, reprocess, and produce a useful product in the same or other form.
- Rebuy – Purchase a product that contains recycled-content materials.
- Redirect – Divert the flow of storm water to reduce or eliminate contact with potential pollution. Move storm water around direct contact with known pollutants.

Based on a typical construction site, the City of Carlsbad is developing a list of pollution prevention opportunities for presentation as a Fact Sheet. The following pollution prevention principles were considered for a construction site:

- Affirmative Procurement – Use alternative, safer, or recycled products.
- Use recycled products
- Reuse or recycle waste products and waste flows
- Reduce the amount of hazardous materials by implementing natural controls or products.
- Reduce use of water or use dry methods.
- Redirect storm water flows away from areas of concern.
- Reduce storm water flows
- Move or cover potential pollution from storm water contact.

To date, the City has implemented the following controls to prevent pollution:

- The preparation of a SWPPP and erosion control plan is required for grading permits and applicable construction projects. The SWPPP, grading and erosion control plans are plan checked by the City to ensure they adequately address the provisions of the General Permit for Construction.
- Engineering inspectors require implementation of BMP's shown on approved erosion control plans, SWPPP, or the project issued a work order (or other enforcement action) until compliance is evidenced.
- All grading permits require the preparation and approval of an erosion control plan.
- Building permits are required to implement appropriate BMP's on a case-by-case basis.

Action #2 - Define the list of options on how the pollution prevention methods will be implemented and how the pollution prevention methods will be required.

The City of Carlsbad will encourage pollution prevention by a combination of training and outreach. A Fact Sheet, accessible by May 2002, will be found at the Permit Counter located at City Hall. The Fact Sheet will include pollution prevention opportunities appropriate to construction sites and be included in Construction Projects.

7.2 Grading Ordinance Update

7.2.1 Purpose and Permit Requirements

Purpose	The purpose of this Permit requirement is to define the process for reviewing the Construction Grading Ordinance.
NPDES Permit Order No. 2001- 01 Requirement(s)	<p>The Permit requirement under the Construction Component for Grading Ordinance Update is as follows:</p> <p>Section F.2.b</p> <p><i>Each Copermittee shall review and update its grading ordinances as necessary for compliance with its storm water ordinances and this Order. The updated grading ordinance shall require implementation of BMPs and other measures during all construction activities, including the following BMPs and other measures or their equivalent:</i></p> <ol style="list-style-type: none"><i>(1) Erosion prevention;</i><i>(2) Seasonal restriction on grading;</i><i>(3) Slope stabilization requirements;</i><i>(4) Phased grading;</i><i>(5) Revegetation as early as feasible;</i><i>(6) Preservation of natural hydrologic features;</i><i>(7) Preservation of riparian buffers and corridors;</i><i>(8) Maintenance of all source control and structural treatment BMPs; and</i><i>(9) Retention and proper management of sediment and other construction pollutants on site.</i>
Jurisdictional URMP Requirements	<p>The Permit requirement under the Construction Component for Grading Ordinance Update is as follows:</p> <p>Section H.1.a.(1)(b)</p> <p><i>Updated grading ordinances.</i></p>
City Action Plan	<ol style="list-style-type: none">1) Review grading ordinance for compliance with Permit requirements and update as necessary.

7.2.2 Grading Ordinance Update Actions

Action #1 - Review grading ordinance for compliance with Permit requirements and update as necessary.

The Grading Ordinance for the City of Carlsbad is located in the City's Municipal Code under Chapter 15.16 "Grading and Erosion Control". The ordinance was reviewed for compliance with the City's storm water ordinances and Order 2000-01. The grading ordinance requires the implementation of BMP's and other measures or their equivalent as follows:

1. Erosion prevention is a requirement of a grading permit as specified in section 15.16.120 "Grading permit limitations requirements and procedures", A.7 Storm Damage Protection.
2. Seasonal restrictions are placed on grading permits in high priority zones within the City, such as, the Coastal Zone. Grading is not prohibited but additional erosion control measures are required as specified in section 15.16.120.A.7.b.
3. Slope stabilization is a requirement of a grading permit as specified in section 15.16.090.3, which requires a preliminary soils investigation and report prior to grading and section 15.16.120.10, which requires a final soils report at the completion of grading
4. Phased grading is not specifically addressed in the grading ordinance but is addressed as a policy within the Engineering Department, which administers the grading permit process. Grading permits are categorized as mass grading, rough grading and precise grading. Each category requires a separate grading plan, erosion control plan, SWPPP, grading permit, agreement and security.
5. Re-vegetation as early as feasible is a requirement of a grading permit as specified in section 15.16.120.7.d
6. Preservation of natural hydrologic features is a requirement of a grading permit as specified in section 15.16.130.4.
7. Preservation of riparian buffers and corridors is a requirement of a grading permit as noted in 6 above.
8. Maintenance of all source control and structural treatment BMP's are a requirement of a grading permit as specified in section 15.16.130.5
9. Retention and proper management of sediment and other construction pollutants on-site is a requirement of a grading permit as noted in 8 above.

The City of Carlsbad uses the grading control requirements and forms provided in the Public Works Engineering Inspection Manual. Currently, the Manual is under reconstruction to include procedures outlined in this Jurisdictional Urban Runoff Management Plan and Order 2001-01. The purpose of the manual is to provide guidelines, procedures, and structure for staff to meet the Department's mission. The Mission Statement of the Engineering Department Inspection Division is:

1. to ensure construction of high quality public improvements and private grading;
2. to perform job duties in a professional manner;
3. to perform consistently on an individual as well as staff wide level;
4. to be firm but fair in dealings with contractors and developers; and
5. to keep City staff, other agencies, and the public informed on construction related issues affecting them.

7.3 Modify Construction and Grading Approval Process

7.3.1 Purpose and Permit Requirements

Purpose

The purpose of this section is to define a process for approving construction and grading projects within the City. Modification of the current process to encompass Permit requirements will accomplish the obligation for the City to incorporate maximum extent practicable (MEP) measures to maintain or improve storm water quality.

NPDES Permit Order No. 2001- 01 Requirement(s)

The Permit requirement under the Construction Component for Modify Construction and Grading Approval Process is as follows:

Section F.2.c

Prior to approval and issuance of local construction and grading permits, each Copermittee shall require all individual proposed construction and grading projects to implement measures to ensure that pollutants from the site will be reduced to the maximum extent practicable and will not cause or contribute to an exceedance of water quality objectives. Each Copermittee shall further ensure that all grading and construction activities will be in compliance with applicable Copermittee ordinances (e.g., storm water, grading, construction, etc.) and other applicable requirements, including this Order.

(1) Construction and Grading Project Requirements

Include construction and grading project requirements in local grading and construction permits to ensure that pollutant discharges are reduced to the maximum extent practicable and water quality objectives are not violated during the construction phase. Such requirements shall include the following requirements or their equivalent:

- (a) Require project proponent to develop and implement a plan to manage storm water and non-storm water discharges from the site at all times;*
- (b) Require project proponent to minimize grading during the wet season and coincide grading with seasonal dry weather periods to the extent feasible. If grading does occur during the wet season, require project proponent to implement additional BMPs for any rain events which may occur, as necessary for compliance with this Order;*
- (c) Require project proponent to emphasize erosion prevention as the most important measure for keeping sediment on site during construction;*
- (d) Require project proponent to utilize sediment controls as a supplement to erosion prevention for keeping sediment on-site during construction, and never as the single or primary method;*
- (e) Require project proponent to minimize areas that are cleared and graded to only the portion of the site that is necessary for construction;*
- (f) Require project proponent to minimize exposure time of disturbed soil areas;*

- (g) *Require project proponent to temporarily stabilize and reseed disturbed soil areas as rapidly as possible;*
- (h) *Require project proponent to permanently revegetate or landscape as early as feasible;*
- (i) *Require project proponent to stabilize all slopes; and*
- (j) *Require project proponents subject to California's statewide General NPDES Permit for Storm Water Discharges Associated With Construction Activities (hereinafter General Construction Permit) to provide evidence of existing coverage under the General Construction Permit.*

**Jurisdictional
URMP
Requirements**

The Permit requirement under the Construction Component for Modify Construction and Grading Approval Process is as follows:

Section H.1.a.(1)(c)

A description of the modified construction and grading approval process.

Section H.1.a.(1)(d)

Updated construction and grading project requirements in local grading and construction permits.

City Action Plan

- 1) Describe the construction and grading approval process for the City.
- 2) Implement the construction and grading requirements into local construction and grading permits.

7.3.2 Modify Construction and Grading Approval Process Actions

Action #1 - Describe the construction and grading approval process for the City.

Typically, construction activity involves soil disturbance or potential non-storm water discharges. In accordance with the Order 2001-01, the City is incorporating storm water management conditions into construction projects within their jurisdiction. The City is requiring, prior to approval of a construction or grading permit, that projects implement measures to ensure that pollutants from the site will be reduced to the maximum extent practicable and will not cause or contribute to an exceedance of water quality objectives. The City is meeting this obligation by amending or conditioning existing permits, procedures and ordinances that are already in place.

The general project review process for obtaining a construction/building permit is as follows:

- Identify the Project's BMP Requirements.
- Determine adequacy of Project's Proposed Storm Water BMPs.
- Include BMP Requirements in Permit Conditions, and/or Plans and Specifications.
- Review Previously Approved Discretionary Permits During the Construction Permit Process for Post-Construction BMPs Identified in Discretionary Approvals, or Equivalent (where applicable).
- Review Proposed Revisions to Approved projects for Additional Storm Water Requirements (where applicable).

As specified by the Permit, the City is implementing the following requirements and those provided in the Engineering Inspection Manual when permitting construction activities:

- a) Non-storm water discharges are prohibited by Section 15.12.050. Projects are required to develop and implement a SWPPP, which addresses appropriate methods to manage storm water and non-storm water discharges from the site at all times. The SWPPP is processed through the City, and is plan checked for adequacy prior to issuance of a grading permit.
- b) Projects are required to minimize grading during the wet season and coincide grading with seasonal dry weather periods to the extent feasible by Section 21.203.040(B)(4)(g). If grading does occur during the wet season, additional erosion control BMP's including landscaping are required by Section 21.203.040(B)(4)(e) and 15.16.120(A)(7)(b).
- c) Projects are required to emphasize erosion prevention to keep sediment on site during construction per Section 15.16.120(A)(7).
- d) Require project proponent to utilize sediment controls as a supplement to erosion prevention for keeping sediment on-site during construction, and never as the single or primary method;
- e) Phased grading to minimize areas that are cleared and graded to only the portion of the site that is necessary for construction is required by Section 21.203.040(B)(4)(g). In addition, phased grading is addressed as a policy within the Engineering Department, which administers the grading permit process. Grading permits are categorized as mass grading, rough grading and precise grading. Each category requires a separate grading plan, erosion control plan, grading permit, SWPPP, agreement and security.
- f) Section 21.203.040(B)(4)(g) requires projects to minimize exposure time of disturbed soil areas.
- g) Sections 21.203.040(B)(4)(g) and 15.16.120(A)(7)(d) require projects to temporarily stabilize and reseed disturbed soil areas as rapidly as possible.
- h) Sections 21.203.040(B)(4)(g) and 15.16.120(A)(7)(d) require projects to permanently re-vegetate or landscape as early as feasible;

- i) Slope stabilization is a requirement of a grading permit as specified in Section 15.16.090.3, which requires a preliminary soils investigation and report prior to grading and Section 15.16.120.10, which requires a final soils report at the completion of grading.
- j) Projects subject to California's statewide General NPDES Permit for Storm Water Discharges Associated With Construction Activities (General Construction Permit) are required by Section 15.12.080(D) to provide evidence of coverage by submittal of a SWPPP prepared in accordance with the provisions of the General Construction Permit, and to provide a copy of the State Board NOI Acceptance Letter including the WDID number.

There are four basic types of projects in the City of Carlsbad. Details on the how different types of projects will be reviewed during the review process to ensure compliance with the minimum BMPs is discussed below. Types of construction projects include:

- Exempt Projects
- Building Permit Projects
- Grading/Building Projects not subject to the require an NPDES General Construction Permit
- Grading/Building Projects that are subject to a NPDES General Construction Permit

Exempt Projects

To qualify for an exclusion from storm water BMPs and BMP documentation requirements, project proponents will be required to complete a certification of exemption prior to the issuance of any regulatory approval or permit. Approval of exemptions will be limited to only those projects where ALL activity, including storage and handling of construction-related materials and any wastes or spills, will be completely enclosed (i.e., not exposed to storm water) and no conduit to storm drains or surface waters exist (except for sanitary sewer system). Examples of types of activities that will be categorized as exempt:

- Interior remodeling
- Mechanical permit work
- Electrical permit work
- Tenant improvements
- Signs
- Changes of use within an existing building
- Temporary mobile home and trailer permits
- Minor permits accessory to an existing building such as patio covers, decks and carports
- Emergency construction activities required for immediate protection of public health and safety

These exemptions would not relieve the property owners or contractors from preventing any construction-related materials, wastes, spills or residues from entering storm water conveyance systems. An abbreviated Storm Water Management Plan may be required, if deemed necessary by the City staff.

Projects Requiring a Building Permit

Construction will be required to comply with minimum BMP requirements established by the City. Requirements will be directed at site management, construction materials and waste management controls, as well as off-site sediment tracking and transport. Because some activities with the potential to disturb soil (e.g., landscaping, grading less than permit threshold, etc.) may not require grading permits, minimum BMPs will be required to address basic erosion and sediment control practices.

For projects in this category, the City will or require property owners or applicants to provide the following:

- A certification of intent to comply with storm water requirements prior to the issuance of a building permit
- A list of the site-specific BMPs to be implemented
- A Storm Water Management Plan (City's preliminary form attached)

The City will have the option to require a Storm Water Pollution Prevention Plan (SWPPP) or a Caltrans Water Pollution Control Plan (WPCP) for projects with disturbed areas less than 5 acres, if deemed necessary.

Projects Not Subject to the State General Construction Permit

For activities that require a grading permit and where the amount of soil being disturbed is less than 5 acres, project proponents will be required to comply with minimum BMP requirements to be established by the City and implemented through the City's grading permit process. Additional BMPs may be required based on project-specific activities.

For projects in this category, the City will require property owners or applicants to provide the following:

- A certification of intent to comply with storm water requirements
- A checklist of selected BMPs and location of the BMPs on project plans for review by the City.
- Certification of intent to maintain selected BMPs.
- A Storm Water Management Plan (City's preliminary form attached)

The City will have the option to require A Storm Water Pollution Prevention Plan (SWPPP) or a Caltrans Water Pollution Control Plan (WPCP) for projects with disturbed areas less than 5 acres, if deemed necessary.

Projects Subject to the State General Construction Permit

For activities that will disturb greater than five acres of soil, project proponents will be required to select and implement erosion control, sediment control and non-stormwater BMPs to prevent the discharge of pollutants off-site or to a storm water conveyance system. In addition to meeting the City's minimum BMP requirements the project proponent must provide evidence of existing coverage under the State General Construction Permit.

For projects in this category, the City will require property owners to provide other documentation prior to the commencement of construction. Examples include the following:

- Notice of Intent (NOI) to comply with the State General Construction Permit and a copy of the SWRCB letter showing the WDID # issued for the project.
- A checklist of selected BMPs and location of the BMPs on project plans for review by Copermittee staff.
- A Storm Water Pollution Prevention Plan (SWPPP) or a Caltrans Water Pollution Control Plan (WPCP)
- Certification of intent to maintain selected BMPs.
- Applicants may elect to substitute their SWPPP for the Storm Water Management Plan, if minimum BMPs meet the City's requirements.

Detailed checklists will be provided to the City of Carlsbad staff to ensure that appropriate BMPs will be in place. A sample Plan Checklist for Construction/Building Permits is included at the end of this Chapter. A preliminary Storm Water Management Plan that includes a certification statement that the minimum BMPs will be used and maintained is included at the end of this Chapter.

Action #2 - Implement the construction and grading requirements into local construction and grading permits.

The sample Building/Grading Permits Checklist and preliminary Storm Water Management Plan will be implemented by The City of Carlsbad to ensure the construction and grading requirements are incorporated into the construction/building permits. Currently, the Public Works Engineering Inspection Manual is being updated to include the requirements of this JURMP and Order 2001-01. The Manual is used to provide staff with consistent guidelines and instructions for new and significant redevelopment public and private projects.

The following construction and grading requirements will be incorporated into the construction/building permits through the attached checklist:

Include construction and grading project requirements in local grading and construction permits to ensure that pollutant discharges are reduced to the maximum extent practicable and water quality objectives are not violated during the construction phase. Such requirements will be included in a project checklist and be equivalent to the following:

- Require project proponent to develop and implement a plan to manage storm water and non-storm water discharges from the site at all times;
- Require project proponent to minimize grading during the wet season and coincide grading with seasonal dry weather periods to the extent feasible. If grading does occur during the wet season, require project proponent to implement additional BMPs for any rain events which may occur, as necessary for compliance with the Permit;
- Require project proponent to emphasize erosion prevention as the most important measure for keeping sediment on site during construction;
- Require project proponent to utilize sediment controls as a supplement to erosion prevention for keeping sediment on-site during construction, and never as the single or primary method;
- Require project proponent to minimize areas that are cleared and graded to only the portion of the site that is necessary for construction;
- Require project proponent to minimize exposure time of disturbed soil areas;
- Require project proponent to temporarily stabilize and reseed disturbed soil areas as rapidly as possible;
- Require project proponent to permanently revegetate or landscape as early as feasible; and
- Require project proponent to stabilize all slopes.

City of Carlsbad

Checklist for Building/Grading Permits

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Project Name: Contractor:	Location:
Project Class: (please check appropriate box) <input type="checkbox"/> Exempt (no outside work) Stop here! <input type="checkbox"/> Building Permit <input type="checkbox"/> Grading/Building Permit	
Activities: (please check all that apply) <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Demolition (outside) <input type="checkbox"/> Grading </div> <div style="width: 48%;"> <input type="checkbox"/> Excavation <input type="checkbox"/> Construction/Repair </div> </div>	
Disturbed Area: (please check appropriate box) <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> < 5,000 sq/ft <input type="checkbox"/> < 20,000 sq/ft <input type="checkbox"/> < 1 acre <input type="checkbox"/> 1 - 5 acres (Phase II ~ March 2002) </div> <div style="width: 48%;"> <input type="checkbox"/> > 5 acres (requires CA General Construction Permit) <input type="checkbox"/> > 5 acres and discharges to tributary of CWA section 303(d) water body or 200 feet (ESA) <input type="checkbox"/> > 50 acres </div> </div>	
Grading/Construction: (please check appropriate box) When will Grading/Construction Activities Occur? <input type="checkbox"/> Wet Season (October 1 - April 30) <input type="checkbox"/> Dry Season (May 1 - September 30) <input type="checkbox"/> Both	
Proximity to Water Bodies: (please check appropriate box) Carlsbad Watershed <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Hydrologic Unit A <input type="checkbox"/> Hydrologic Unit B </div> <div style="width: 48%;"> <input type="checkbox"/> Hydrologic Unit C <input type="checkbox"/> Hydrologic Unit D </div> </div> Receiving Water Body <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Buena Vista Lagoon <input type="checkbox"/> Agua Hedionda Lagoon <input type="checkbox"/> Encinas Creek </div> <div style="width: 48%;"> <input type="checkbox"/> Batiquitos Lagoon <input type="checkbox"/> Pacific Ocean </div> </div> Distance from receiving water body _____ feet	
Projects requiring Building Permit must include following items: <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Certificate of intent to comply <input type="checkbox"/> Checklist of selected BMPs applicable </div> <div style="width: 48%;"> <input type="checkbox"/> Storm Water Pollution Prevention Plan (SWPPP) [or a Caltrans Water Pollution Control Plan (WPCP) (optional)] </div> </div>	
Projects Not subject to CA General Construction Permit (require grading permit and > 5 acres) must include following items: <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Certificate of intent to comply <input type="checkbox"/> Checklist of selected BMPs and location on project plans </div> <div style="width: 48%;"> <input type="checkbox"/> SWPPP (optional) <input type="checkbox"/> WPCP (optional) <input type="checkbox"/> Certificate of intent to maintain selected BMPs </div> </div>	
Projects subject to CA General Construction Permit (< 5 acres) must include following items: <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Notice of Intent (NOI) and SWRCB letter issuing WDID number <input type="checkbox"/> Checklist of selected BMPs and location on project plans </div> <div style="width: 48%;"> <input type="checkbox"/> SWPPP or WPCP <input type="checkbox"/> Certificate of intent to maintain selected BMPs <input type="checkbox"/> Substitution of SWPPP for BMP checklist and project plans </div> </div>	

City of Carlsbad Checklist for Building/Grading Permits

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	Yes	No	N/A
1. Plan to manage storm water and non-storm water discharges during construction activities at all times?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If no, provide Storm Water Management Application Form.			
2. Does grading occur during the wet season (October 1 - April 30)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, can grading be rescheduled?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
What additional BMPs (e.g., Phasing, Minimize Disturbed Soil Area) will be required? _____ _____			
3. Are adequate erosion prevention BMPs included?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If no, additional BMPs required? _____ _____			
4. Are adequate sediment control BMPs included?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If no, additional BMPs required? _____ _____			
5. Is cleaning and grading minimized to only the portion of the site necessary for construction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If no, any additional requirements? _____ _____			

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Checklist for Building/Grading Permits

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	<u>Yes</u>	<u>No</u>	<u>N/A</u>
6. Is the exposure time of disturbed soil areas minimized?			
If no, any additional requirements?			

7. Will the disturbed area be temporarily stabilized and reseeded as rapidly as possible?			
If no, any additional requirements?			

8. Will the disturbed area be permanently revegetated or landscaped as early as feasible?			
If no, any additional requirements?			

9. If slopes are disturbed, will the slopes be stabilized?			
If no, any additional requirements?			

7.4 Source Identification

7.4.1 Purpose and Permit Requirements

Purpose	The purpose of this section is to establish an annual list of the current construction sites and their locations within the City's where size of the construction site not a criterion.
NPDES Permit Order No. 2001- 01 Requirement(s)	<p>The Permit requirement under the Construction Component for Source Identification is as follows:</p> <p>Section F.2.d <i>Each Copermittee shall annually develop and update, prior to the rainy season, a watershed based inventory of all construction sites within its jurisdiction regardless of site size or ownership. This requirement is applicable to all construction sites regardless of whether the construction site is subject to the California statewide General NPDES Permit for Storm Water Discharges Associated With Construction Activities (hereinafter General Construction Permit) or other individual NPDES permit. The use of an automated database system, such as Geographical Information System (GIS) is highly recommended, but not required.</i></p>
Jurisdictional URMP Requirements	<p>The Permit requirement under the Construction Component for Source Identification is as follows:</p> <p>Section H.1.a.(1)(e) <i>A completed watershed-based inventory of all construction sites.</i></p>
City Action Plan	<ol style="list-style-type: none">1) Generate a list of current construction projects with location and watershed, regardless of size.2) Annually update the list of construction sites.

7.4.2 Source Identification Actions

Action #1 - Generate a list of current construction projects with location, regardless of size.

The City of Carlsbad will annually develop and update, prior to the rainy season, a watershed based inventory of all construction sites within its jurisdiction regardless of site size or ownership. The City is accomplishing this through the use of existing automated database systems, including the City Geographical Information System (GIS). Construction sites include any site where an activity such as grading, excavation, clearing, road construction, structure construction, or demolition results in the disturbance of soil. The City is referencing the following sources in producing an inventory of construction projects:

- California General Permit for construction activities lists
- City-issued Building Permits
- City-issued Grading Permits
- Other City-issued construction-related Permits
- Municipal Capital Improvement Projects
- Encroachment Permits
- Municipal Operations and Maintenance Activities

The inventory will be sorted by watershed and hydrologic unit. Individual site records will include at a minimum the information listed in Section 7.5.

Table 7-1 lists active construction sites in the City of Carlsbad as of September 30, 2002. The City inventoried their construction sites using their permit database. The table shown below contains the definitions for the headings in **Table 7-1**.

<u>Characteristic or Criteria</u>	<u>Definition</u>
Location	Address from City of Carlsbad Permit Database
Permit No.	Permit Number assigned by the City of Carlsbad
Description	Type of construction/demolition activity based on permit application
Hydrologic Unit	A, B, C, D
Watershed	The Carlsbad watershed includes the Buena Vista Lagoon, Agua Hedionda, Encinas Creek, Batiquitos Lagoon, and the Pacific Ocean as environmentally sensitive.

Action #2 - Annually update the list of construction sites.

The list of construction sites in the City of Carlsbad shown in **Table 7-1** will be updated annually prior to the start of the rainy season (October 1). The updated inventory will be included in the Annual Report. The City's goal is to capture 80% of construction activities in Permit year 2001-2002 and is achieved in **Table 7-1**. The City's goal is to capture 90% of construction activities in subsequent Permit years.

7.5 Threat to Water Quality Prioritization

7.5.1 Purpose and Permit Requirements

Purpose	The purpose of this Permit requirement is to prioritize importance of construction sites in terms of impact to storm water by developing criteria to rank and identify areas and activities that might affect storm water quality.
NPDES Permit Order No. 2001- 01 Requirement(s)	<p>The Permit requirement under the Construction Component for Threat to Water Quality Prioritization is as follows:</p> <p>Section F.2.e.(1) <i>To establish priorities for construction oversight activities under this Order, the Copermittee shall prioritize its watershed-based inventory (developed pursuant to F.2.d. above) by threat to water quality. Each construction site shall be classified as high, medium, or low threat to water quality. In evaluating threat to water quality, each Copermittee shall consider (1) soil erosion potential; (2) site slope; (3) project size and type; (4) sensitivity of receiving water bodies; (5) proximity to receiving water bodies; (6) non-storm water discharges; and (7) any other relevant factors.</i></p> <p>Section F.2.e.(2) <i>A high priority construction site shall at a minimum be defined as a site meeting either of the following criteria or equivalent criteria:</i></p> <ul style="list-style-type: none"><i>(a) The site is 50 acres or more and grading will occur during the wet season; OR</i><i>(b) The site is (1) 5 acres or more and (2) tributary to a Clean Water Act section 303(d) water body impaired for sediment or is within or directly adjacent to or discharging directly to a coastal lagoon or other receiving water within an environmentally sensitive area (as defined in Section F.1.b.(2)(a) vii of this Order).</i>
Jurisdictional URMP Requirements	<p>The Permit requirement under the Construction Component for Threat to Water Quality Prioritization is as follows:</p> <p>Section H.1.a.(1)(f) <i>A completed prioritization of all construction sites based on threat to water quality.</i></p>
City Action Plan	<ol style="list-style-type: none">1) Annually prioritize the list of current construction sites using the criteria provided in the Permit.

7.5.2 Threat to Water Quality Prioritization Actions

Action #1 - Annually prioritize the list of construction sites using the criteria provided in the Permit.

Classification of Priority

After the inventory in Section 7.4 is completed, the construction sites will be analyzed and classified as High, Medium or Low threat to water quality. In evaluating the threat to water quality, the City will consider as a minimum the following factors:

1. Soil Erosion Potential

The City will evaluate what role soil erosion potential has on the priority of a construction site. Soils in the City are generally highly erosive and therefore the threat caused by the erosion potential may be prevalent for all sites.

2. Site Slope

Site slope is directly related to the potential for a construction site to discharge pollutants into conveyances or receiving waters. As the average slope of the site increases, the greater the potential for water leaving the site at a high velocity. When evaluating the relationship of site slope to prioritization, the analysis will include the average slope area of the finished slopes.

3. Project Size

The total of the disturbed area of a site is important in determining what priority the City is going to assign a site. The Permit requires that all projects that are 50 acres or more and grading will occur during the wet season (Oct.-April) must be considered a High priority. The Permit also requires that sites greater than five acres and tributary to a CWA 303(d) water body impaired for sediment or is within or directly adjacent to or discharging directly to a coastal lagoon or other receiving water within an ESA also be considered High priority. It is likely that projects with between 1 and 50 disturbed acres will be considered Medium priority depending upon other relevant site factors. Projects that are considered Medium Priority will have to meet the minimum BMP and inspection requirements designated by the City. It is also anticipated that relatively small projects, one acre or less, that pose a minimal threat to water quality, will be considered Low priority. Low priority sites should still required to meet the minimum BMP requirements designated by the City.

4. Project Type

The City will determine how project types affect water quality. It is not necessarily the type of project that has a bearing on the potential to degrade water quality. The impact of the construction process and the increase in impervious surfaces is the primary factor. It is anticipated that the City will include the “percent impervious surface” when determining the priority in relation to the project type. Water quality degradation increases with percent imperviousness. The increased volume and velocity of runoff from developed urban areas greatly accelerates the erosion of downstream natural channels.

5. Non-Storm water Discharges

In evaluating the priority that a site should have during construction activities, the City will consider the types of non-storm water pollutants that have the potential to be discharged during construction

activities. Examples of activities or materials that generate non-storm water pollutants that are commonly found on construction sites are:

- Soil amendments
- Fertilizers
- Concrete waste
- Wastewater as a result of dewatering activities
- Construction materials and compounds
- Types of machinery on site
- Equipment maintenance (ex. Fueling, lubing etc.) on site
- Pipelines and irrigation system flushing.

6. Proximity to Water Bodies

At a minimum, high priority sites are those that are (1) 5 acres or more and (2) tributary to a Clean Water Act section 303(d) water body impaired for sediment or (3) is within 200 feet of or discharging directly to a coastal lagoon or other receiving water within an environmentally sensitive area (as defined in section F.1.b.(2)(a)vii of Permit). When determining the “proximity of waterbodies” criteria, the City will consider whether the conveyance’s tributary to a water body are lined or unlined. A lined conveyance has the potential to carry water containing construction related pollutants longer distances than an unlined conveyance. Medium priority sites are those that are not located within an area designated as an Environmentally Sensitive Area or adjacent or discharging directly to impaired receiving waters. Low priority sites are those that pose a minimal risk of discharge to receiving waters and are not directly adjacent or discharging directly to receiving waters or an Environmentally Sensitive area.

7. Sensitivity of Waterbodies

In determining the priority of a construction site the City will determine if the site is within an area with environmentally sensitive waterbodies and if the site has the potential to discharge construction related pollutants into the receiving waters. Environmentally Sensitive water bodies may include but are not limited to all Clean Water Act Section 303(d) impaired water bodies; areas designated as Areas of Special Biological Significance by the State Water Resources Control Board (Water Quality Control Plan for the San Diego Basin (1994) and amendments); water bodies designated with the RARE beneficial use by the State Water Resources Control Board (Water Quality Control Plan for the San Diego Basin (1994) and amendments); areas designated as preserves or their equivalent under the Multi Species Conservation Program within the Cities and County of San Diego; City of Carlsbad Habitat Management Plan and any other equivalent environmentally sensitive areas which have been identified by the City.

8. Existing Detention Basins

The City has a number of existing regional detention basins. Where there is an existing, functioning detention basin between a construction site and the receiving water, this factor will be taken into account.

High Priority Construction Sites

Permit section F.2.e.(2) establishes the minimum types of construction activities, which must be given high priority status. It additionally establishes criteria that must be considered in determining whether other types

of construction activities should be considered high priority. For each of these, City program activities and requirements must be established which appropriately reflect these priorities.

Permit section F.2.d2.(2) identifies two categories of minimum high priority activities. A high priority construction site at a minimum is defined as a site meeting either of the following criteria or equivalent criteria:

*“(a) The site is 50 acres or more and grading will occur during the wet season; OR
(b) Construction sites 5 acres or more and tributary to a Clean Water Act Section 303(d) water body impaired for sediment or is within or directly adjacent to or discharging directly into a coastal lagoon or other receiving water within an environmentally sensitive area (ESA).”*

The City of Carlsbad inventory of construction sites is provided in **Table 7-1**. A priority ranking system has been tentatively developed to identify high, medium, and low priority areas using the following criteria outlined in Permit Section F.2.e.(1). Where the Permit did not specifically identify criteria limitations, other references or a logical approach was used. The proposed criteria will be used in a “pilot test” over the next six months in order to verify it. Once finalized or revised, the criteria will be used in the priority ranking system of construction sites. The proposed criteria uses a numbering system which results in the highest total point for those sites that will be labeled “high priority”. The numerical ranges that will lead to a “high”, “medium” or “low” ranking is part of the pilot test being conducted at this time.

A: Soil Erosion Potential

The Soil Erosion Potential is based on percent of the site to be graded, activity, and season grading is scheduled.

- 1 = No grading activities; no subsurface excavations and no outside demolition/building activities.
- 5 = Less than 50 % of the site to be graded at any one time; outside demolition/building/earthwork will occur outside rainy season (May 1 through September 31).
- 10 = Greater than 50% of the site to be graded at any one time; outside demolition/ building/ earthwork will occur outside of the rainy season (May 1 through September 31); or, less than 50% of the site to be graded at one time; outside demolition/building/earthwork will occur during rainy season (October 1 through April 30);
- 15 = Greater than 50% of the site to be graded at one time; outside demolition/building/earthwork will occur during rainy season (October 1 through April 30).

B: Site Slope

The following ranking will occur based on the average slope of the site where outside grading/demolition/ building/ excavation is planned.

- 1 = Less than 3% slope (gentle grade);
- 3 = greater than or equal to 3 % slope and less than 7% slope (medium incline);
- 5 = 7% slope or higher (steep profile).

C: Project Size and Type

Based on the General Construction Permit and outdoors activities:

- 1 = extremely small (< (standard residential lot size) 5,000 square feet to be graded, demolished or built);
- 3 = very small (> or = 1/2 acre graded, demolished or built);
- 5 = small (> or = 1 acre);
- 10 = medium; (> 5 acres); and
- 15 = large (>50 acres).

D: Sensitivity of Receiving Water Body

The sensitivity of the Receiving Water Body based on 303(d) listing or Environmentally Sensitive Area (ESAs)).

- 1 = No ESA or 303(d) listing;
- 5 = Yes, ESA or 303(d) listing; 303(d) listing in at least one constituent that could potentially be discharged such as sediment/silt.

E: Proximity to Receiving Water Body (303d water bodies or ESA)

As defined in Section F.1.b.(2)(a)vii to 303(d) water bodies or Environmentally Sensitive Areas (Section F.1.b.(2)(a)vii of Order 2001-01).

Defined as: Distance from the water body (including tributaries)

- 0 = not applicable
- 1 = low (>1 mile);
- 3 = >200 feet and < 1 mile;
- 5 = medium (approximately within 200 feet)
- 10 = high (direct discharge or adjacent)

F: Non-Storm Water Discharges

Based on the potential for storm water discharges to occur and observations for active construction sites.

- 0 = (fully contained)
- 1 = low. BMPs proposed to prevent or control non-storm water discharges (Spill and Pollution Prevention Training Program implemented, kits in place, operation and maintenance [O&M] program implemented for maintaining BMPs).
- 3 = potential (non-Storm Water sources observed without BMPs implemented, but no discharge, or unknown).
- 5 = high (observable/known non-storm water discharge occurs through interviews with City staff).

G : Ranking

Ranking is a calculation representing the potential threat to water quality based on the type of activity, season, size of disturbed area, and proximity to an ESA. The calculation emphasizes the proximity to an ESA as follows:

$$\text{Ranking} = (A+B+C+(D \cdot E)+F)$$

where A through F are defined in the above section.

H: Ranking (High, Medium & Low)

Rankings are based on type, location, and size where the categories are unitless. The purpose of the ranking is to identify those construction sites with a high, medium, and low potential to affect storm water quality.

I: High Ranking by Section F.2.e.(2.) of Permit (Yes or No)

Section F.2.e.(2). Of the Permit requires the following two categories of sites to be ranked as high priority:

- (a) The site is 50 acres or more and grading will occur during the wet season; OR
- (b) The site is (1) 5 acres or more and (2) tributary to a Clean Water Act section 303(d) water body impaired for sediment or is within or directly adjacent to or discharging directly to a coastal lagoon or other receiving water within an environmentally sensitive area (as defined in Section F.1.b.(2)(a)vii of this Order).

The City of Carlsbad will prioritize inspections of the construction sites based on the ranking system. See Chapter 7.7 for details on inspections.

The City of Carlsbad will annually update the ranking calculations presented in **Table 7-1** prior to the start of the rainy season (before October 1) and provide the updated ranking in the Annual Report.

7.6 Best Management Practice Implementation

7.6.1 Purpose and Permit Requirements

Purpose	The purpose of this requirement is to identify BMPs for implementation at construction sites. Minimum BMPs will be designated to establish a baseline for maintaining storm water quality.
NPDES Permit Order No. 2001- 01 Requirement(s)	<p>The Permit requirement under the Construction Component for BMP Implementation is as follows:</p> <p>Section F.2.f.(1) <i>Each Copermittee shall designate a set of minimum BMPs for high, medium, and low threat to water quality construction sites (as determined under Section F.2.e). BMPs are to be implemented year round.</i></p> <p>Section F.2.f.(2) <i>Each Copermittee shall implement, or require the implementation of, the designated minimum BMPs (based upon the site's threat to water quality rating) at each construction site within its jurisdiction year round. If particular minimum BMPs are infeasible at any specific site, each Copermittee shall implement, or require the implementation of, other equivalent BMPs. Each Copermittee shall also implement or require any additional site specific BMPs as necessary to comply with this Order, including BMPs which are more stringent than those required under the statewide General Construction Permit.</i></p> <p>Section F.2.f.(3) <i>Each Copermittee shall implement, or require the implementation of, BMPs year round; however, BMP implementation requirements can vary based on wet and dry seasons.</i></p> <p>Section F.2.f.(4) <i>Each Copermittee shall implement, or require implementation of, additional controls for construction sites tributary to Clean Water Act Section 303(d) water bodies impaired for sediment as necessary to comply with this Order. Each Copermittee shall implement, or require implementation of, additional controls for construction sites within or adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in Section F.1.b.(2)(a)(vii) of this Order) as necessary to comply with this Order.</i></p>
Jurisdictional URM Requirements	<p>The Permit requirement under the Construction Component for BMP Implementation is as follows:</p> <p>Section H.1.a.(1)(g) <i>Which BMPs will be implemented, or required to be implemented, for each priority category.</i></p> <p>Section H.1.a.(1)(h) <i>How BMPs will be implemented, or required to be implemented, for each priority category.</i></p>

City Action Plan

- 1) Develop a list of BMPs for each category of high, medium, and low priority construction sites.
- 2) Develop a schedule for implementation of the BMPs for construction sites.
- 3) Develop a list of additional BMPs to be implemented for construction sites that discharges to a tributary of a 303(d) water body or is located adjacent to or discharging directly to an ESA.

7.6.2 BMP Implementation Actions

Action #1 - Develop a list of BMPs for each category of high, medium, and low priority construction sites.

This section provides a description of minimum BMP options based on site classifications of high, medium and low threat to water quality. Specific BMP's will be approved by the City during project-specific review of SWPPPs, grading plans, erosion control plans and other water quality documents in the context of local program priorities.

Designation of Minimum BMP's

Because all sites, regardless of the priority, must be protected to prevent discharges to the Maximum Extent Practicable (MEP), the minimum BMP requirements are similar for each priority. Each site, at a minimum must be protected by an effective combination of erosion and sediment controls, materials and waste management controls and site management controls. The minimum BMP for each priority project will be site specific. Determinations are made on a case-by-case basis during City review of the SWPPP, grading plan and erosion control plan. BMP's are required to be in place year round.

The following seven categories of BMPs are required on a construction site:

1. Erosion control method for graded slopes;
2. Erosion control method for graded flat areas (slope < 5%);
3. Sediment control for perimeter boundaries;
4. Offsite tracking control of sediment;
5. Materials management control;
6. Waste management control; and
7. Non-storm water management control.

Construction sites, regardless of size, will be required to implement at least one BMP from categories 1 through 3 and all applicable BMPs in categories 4 through 7. The same BMPs will be implemented at high, medium, and low priority construction sites. However, the inspection frequency by the City of Carlsbad will be based on the priority ranking as presented in Section 7.7.

If one BMP is not adequate then a higher level BMP will automatically be required. For example, a stabilized construction entrance of large rocks (TC-1) may be adequate for a portion of the project, but may need to be upgraded to a tire wash facility (TC-3) if truck traffic increases and offsite tracking occurs. If particular minimum BMPs are infeasible at any specific site, the City will require the implementation of, other equivalent BMPs.

Additional BMP Requirements

BMP implementation is required year round, regardless of site threat to water quality priority. The implementation of additional BMP's to provide redundancy will be required for high priority sites during the wet season.

Additional BMPs for all construction sites in the City of Carlsbad to considered are as follows:

- Scheduling (e.g., not grading during the rainy season)
- Preservation of Existing Vegetation
- Vegetation Buffer Strips
- Dust Control
- Soil Stabilizers
- Earthen Dikes
- Ditches and Berms
- Slope Drains
- Temporary Drains & Swales
- Check Dams
- Slope Terracing
- Brush or Rock Filter
- Sediment Trap
- Sediment Basin
- Employee & Subcontractor Training
- Spill Prevention & Control
- Contaminated Soil Management
- Water Conservation
- Structure Construction & Painting
- Paving Operations
- Dewatering Operations
- BMP Inspection and Maintenance
- Phase Construction
- Good Housekeeping
- Scheduling (e.g., not grading during the rainy season potentially doesn't need 100% erosion control);
- Phasing (conduct grading in phases to minimize disturbed area);
- Training; and
- Good Housekeeping.

The incorporation of the BMPs into the construction/building permit process was detailed in Section 7.3.

Action #2 - Develop a schedule for implementation of the BMPs for construction sites.

Implementation of BMP's for each construction site, is required by the City Grading Ordinance. Grading is inspected according to the City's Engineering Inspection Manual. Based on the City Inspector's analysis of an individual site, if particular minimum BMP's are infeasible at that particular time for that particular site, the Inspector will require the implementation of equivalent BMP's. The Inspector may also require implementation of additional BMP's beyond the minimum BMP's in this JURMP, including those more stringent than in the statewide General Construction Permit.

The City of Carlsbad will require implementation of the minimum BMPs at all construction sites in May 2002. BMPs are required to be implemented year round at all construction sites as indicated below.

Dry Season Requirements (May 1 through September 30)

- A. Adequate perimeter protection BMPs must be installed and maintained.

- B. Adequate sediment control BMPs must be installed and maintained.
- C. Adequate BMPs to control off-site sediment tracking must be installed and maintained.
- D. If the site is located in a highly sensitive area or if the weather is deemed adequate for rainfall, the City of Carlsbad will have the option to require implementation of a weather triggered plan 48 hours prior to a predicted storm (A predicted storm event is defined as a forecasted, 50% chance of rain). Best management practices include giving careful consideration of the required hours and on-site supplies needed to ensure that no portion of the site is insufficiently protected during a storm event. Careful consideration will be given to ensure that each construction phase has effective, continuous and year-round BMPs sequenced in such a way to ensure that no portion of the site is insufficiently protected resulting in erosion and illegal discharges.
- E. Deployment of physical or vegetation erosion control BMPs will commence as soon as slopes are at final grade for any portion of the site. The project proponent may not continue to rely on the ability to deploy standby BMP materials to prevent erosion of slopes that have been completed.
- F. The area that can be cleared or graded and left exposed at one time is limited to the amount of acreage that the project proponent can adequately protect prior to a predicted rainstorm.

This last requirement involves grading at larger sites to be phased. For example, it may be necessary to deploy erosion and sediment control BMPs in areas that are not completed but are not actively being worked before additional grading is done.

Rainy Season Requirements (October 1 through April 30)

In addition to the requirements listed under the Dry Season Requirements:

- A. One hundred percent of all exposed disturbed areas must have erosion protection BMPs properly installed. This would include all building pads, unfinished roads and slopes. The only relief from this requirement for slopes greater than 3:1(Horizontal vs. Vertical) is if the site has properly designed de-silting basins at all discharge points.
- B. Perimeter protection and sediment control BMPs will be upgraded if necessary to provide sufficient protection for storms likely to occur during the rainy season.
- C. Adequate physical or vegetation erosion control BMPs will be installed and established for all completed slopes prior to the start of the rainy season. These BMPs will be maintained throughout the rainy season. If a selected BMP fails, it will be repaired and improved, or replaced with an acceptable alternate as soon as it is safe to do so. The failure of a BMP shows that the BMP, as installed, was not adequate for the circumstances in which it was used. Repairs or replacements will therefore put a more robust BMP in place.
- D. A disturbed area that is not completed but that is not being actively graded must be fully protected from erosion if left for 10 or more days. The ability to deploy standby BMP materials is not sufficient for these areas. BMPs will actually be deployed.

- E. Deployment of physical or vegetation erosion control BMPs will commence as soon as slopes are completed for any portion of the site. The project proponent may not continue to rely on the ability to deploy standby BMP materials to prevent erosion of slopes that have been completed

The goal is 80% compliance with the minimum BMP requirements in 2001-2002 and 90% compliance in subsequent Permit years.

Action #3 - Develop a list of additional BMPs to be implemented for construction sites that discharges to a tributary of a 303(d) water body or is located adjacent to or discharging directly to an ESA.

Sites Tributary to 303(d) Water Bodies Impaired for Sediment or Discharging into Environmentally Sensitive Areas

Construction sites tributary to Clean Water Act section 303(d) water bodies impaired for sediment and sites discharging directly into environmentally sensitive areas require additional BMP implementation. These sites are by definition classified as posing a high threat to water quality. In the 1998 303(d) listing, the Agua Hedionda Lagoon is impaired for sediment and siltation. Refer to JURMP section 7.5.2.1 for determination of direct discharge into an environmentally sensitive area.

Buena Vista Lagoon also has impaired beneficial uses (aquatic life) due to high sedimentation/siltation. Figure 1 identifies the portions of Carlsbad where construction sites have the potential to discharge into a tributary of a 303(d) or directly into a 303(d) water body or sites located within 200 feet of an ESA. These water bodies include the Pacific Ocean, Buena Vista Lagoon, Encinas Creek, Agua Hedionda Lagoon, and Batiquitos Lagoon. The City of Carlsbad will conduct additional education on implementing BMPs through face-to-face discussions in the field prior to the start of the project or distributing informative materials to land owners and/or construction supervisor. The information will emphasize the importance of implementing construction site BMPs to protect the quality of the receiving waters.

7.7 Inspection of Construction Sites

7.7.1 Purpose and Permit Requirements

Purpose	The purpose of this section is to identify the process, to include schedule and frequency, for inspecting constructing sites for adherence to the JURMP requirements. Based on this information, the City will be able to project staff requirements to appropriately inspect construction sites.
NPDES Permit Order No. 2001- 01 Requirement(s)	<p>The Permit requirement under the Construction Component for Inspection of Construction Sites is as follows:</p> <p>Section F.2.g.(1) <i>Each Copermittee shall conduct construction site inspections for compliance with its ordinances (grading, storm water, etc.), permits (construction, grading, etc.), and this Order. Inspections shall include review of site erosion control and BMP implementation plans.</i></p> <p>Section F.2.g.(2) <i>Each Copermittee shall establish inspection frequencies and priorities as determined by the threat to water quality prioritization described in F.2.e above. During the wet season (i.e., October 1 through April 30 of each year), each Copermittee shall inspect, at a minimum, each High Priority construction site, either:</i></p> <p><i>(a) Weekly OR</i></p> <p><i>(b) Monthly for any site that the responsible Copermittee certifies in a written statement to the SDRWQCB all of the following (certified statements may be submitted to the SDRWQCB at any time for one or more sites):</i></p> <ul style="list-style-type: none"><i>i. Copermittee has record of construction site's Waste Discharge Identification Number (WDID#) documentation construction site's coverage under the statewide General Construction Permit; and</i><i>ii. Copermittee has reviewed the construction site's Storm Water Pollution Prevention Plan (SWPPP); and</i><i>iii. Copermittee finds SWPPP to be in compliance with all local ordinances, permits, and plans; and</i><i>iv. Copermittee finds that the SWPPP is being properly implemented on site.</i> <p><i>At a minimum, Medium and Low Priority construction sites shall be inspected by Copermittees twice during the wet season. All construction sites shall be inspected by the Copermittees as needed during the dry season (i.e., May 1 through September 30 of each year).</i></p> <p>Section F.2.g.(3) <i>Based upon site inspection findings, each Copermittee shall implement all follow-up actions necessary to comply with this Order.</i></p>

**Jurisdictional
URMP
Requirements**

**The Permit requirement under the Construction Component for
Inspection of Construction Sites is as follows:**

Section H.1.a.(1)(i)

Planned inspection frequencies for each priority category

Section H.1.a.(1)(j)

Methods for inspection

City Action Plan

- 1) Generate a schedule and frequency for each priority category of construction sites. Staff appropriately based on level of effort.
- 2) Devise a checklist for inspecting construction sites.

7.7.2 Inspection of Construction Sites Compliance Actions

Action #1 - Generate a schedule and frequency for each priority category of construction sites. Staff appropriately based on level of effort.

Construction site inspections are conducted in accordance with the City of Carlsbad Grading Ordinance and Public Works policies. The Inspection Division receives a copy of the approved grading plan, erosion control plan and SWPPP prior to the preconstruction meeting. At the preconstruction meeting, prior to issuance of the grading permit, the SWPPP and specific BMP requirements are reviewed with the owner, contractor and soils engineer. Site implementation of BMP's will be inspected with each visit by the Engineering Inspector.

Inspection Frequencies and Priorities

The City inspects construction sites with the following frequency:

Threat to Water Quality Priority	Dry Season	Wet Season
Low	As needed	As needed*
Medium	As needed	Weekly**
High	Weekly**	Weekly**

*A minimum of twice during the wet season.

**May be monthly upon certification by the City to SDRWQCB that i) a record of the site WDID# is on file, ii) The SWPPP has been reviewed by the City, iii) the SWPPP has been found to be in compliance with City ordinances, permits and plans, and iv) the SWPPP is being properly implemented on site.

Action #2 - Devise a checklist for inspecting construction sites.

The City of Carlsbad has developed an inspection program to ensure compliance with its applicable Ordinances, Permits (building, grading, storm water etc.) and Order 2001-01. The City has developed site inspection procedures, as necessary, to ensure that developers implement an effective combination of BMPs to meet the minimum water quality protection requirements, based upon the sites threat to water quality prioritization. Both public and private construction projects shall be inspected by municipal inspectors or other contracted staff with enforcement authority to verify that the construction activities are being performed in accordance with the project plans, building and grading permits, and applicable codes, regulations and ordinances. If the inspected site does not meet the City's minimum water quality protection requirements or there is a discharge related to construction activities, City's inspectors will immediately direct compliance and conduct follow-up inspections as necessary to confirm that compliance is attained. Additional inspections will be conducted as project scope dictates the need for modified and/or additional BMPs.

The City has developed inspection requirements and procedures. At a minimum, the following will be addressed:

- Ensure that the projects proponents are meeting all applicable Permit requirements,
- There is an effective combination of erosion, sediment and non-storm water BMPs implemented and maintained to prevent the discharge of pollutants into storm water conveyances and receiving waters,
- Ensure that the project proponents implement their storm water management on a year round basis.

The inspector may utilize the following framework when conducting an inspection:

- Review project proponents self-inspection checklist to determine whether minimum self-inspections have been performed;

- b) Review the site erosion control and BMP implementation plans and determine whether they are being properly implemented;
- c) Determine if BMPs are being used in accordance with the intent of all laws and approved plans;
- d) Determine whether BMPs are effectively being implemented and maintained properly; and
- e) Determine whether owner/developer/contractor are making appropriate adjustment when ineffective BMPs are found.

If BMPs are either lacking or being implemented improperly, the site will be referred to enforcement. If the inspected site does not meet the minimum water quality protection requirements, City inspectors will follow-up within a reasonable time frame to assure that all applicable requirements are implemented. A sample City Inspector's Checklist is included at the end of this Chapter.

Constructor's Self-Inspections

Construction is a dynamic operation where changes are expected. BMPs for construction sites are usually temporary measures that require frequent maintenance to maintain their effectiveness and may require relocation, revision and re-installation, particularly as project grading progresses. Therefore, developer/construction self-inspections are recommended, particularly during the rainy season.

There are four primary purposes of the self-inspections conducted by developers, owners and contractors:

- a) To ensure that the owners/developers/contractors take full responsibility for storm water pollution caused by their activities;
- b) To ensure that BMPs are properly implemented and functioning effectively;
- c) To identify maintenance (e.g., sediment removal) and repair needs;
- d) To ensure that the project proponents implement their storm water management plans.

When requested, self-inspection forms will be made available to City inspectors for their review.

The City of Carlsbad uses the inspection process and forms provided in the Public Works Engineering Inspection Manual. Currently, the Manual is under reconstruction to include procedures outlined in this Jurisdictional Urban Runoff Management Plan and Order 2001-01.

7.8 Enforcement of Construction Sites

7.8.1 Purpose and Permit Requirements

Purpose	The purpose of this section is to identify the enforcement mechanisms employed by the City for urging the construction community to implement BMPs for minimizing pollutants from entering the storm water drainage system.
NPDES Permit Order No. 2001- 01 Requirement(s)	<p>The Permit requirement under the Construction Component for Enforcement of Construction Sites is as follows:</p> <p>Section F.2.h</p> <p><i>Each Copermittee shall enforce its ordinances (grading, storm water, etc.) and permits (construction, grading, etc.) at all construction sites as necessary to maintain compliance with this Order. Copermittee ordinances or other regulatory mechanisms shall include sanctions to ensure compliance. Sanctions shall include the following or their equivalent:: non-monetary penalties, fines, bonding requirements, and/or permit denials for non-compliance.</i></p>
Jurisdictional URMP Requirements	<p>The Permit requirement under the Construction Component for Enforcement of Construction Sites is as follows:</p> <p>Section H.1.a.(1)(k)</p> <p><i>A description of enforcement mechanisms and how they will be used</i></p>
City Action Plan	<ol style="list-style-type: none">1) Describe the enforcement mechanisms2) Develop an Enforcement Response Plan to outline how each enforcement mechanism will be applied.

7.8.2 Enforcement of Construction Sites Actions

Action #1 - Describe the enforcement mechanisms.

The Carlsbad Municipal Code has been modified to allow specific enforcement of the water quality requirements contained in the grading ordinance. Sec. 15.12.150 Administrative code enforcement powers and procedures provides additional specific enforcement powers in addition to the general enforcement powers already contained in Title 1, Sections 15.12 and 15.16 of the Municipal Code. The new provisions are:

- A. Cease and Desist Orders
- B. Notice to Clean, Test and/or Abate
- C. Stop Work Orders
- D. Permit or License Suspension or Revocation
- E. Civil Penalties

See Appendix A for the complete text of Municipal Code section 15.12.150.

If a significant and/or immediate threat to water quality is observed by a City Inspector, action should be taken to require the developer/contractor to immediately cease the discharge. The threat to water quality shall be assessed by inspectors for runoff from a construction site that will not be reasonably controlled by the protective measures in place or if a failure of BMP's is resulting in the release of sediments or other pollutants to a degree that may be substantially degrading water quality. The typical progressive enforcement steps that the Inspectors may apply at any time, while using Best Professional Judgment, may include any or all of the following:

- (a) Verbal and/or written warnings;
- (b) Notice of Violation;
- (c) Compliance schedule;
- (d) Cease and Desist Orders or Stop Work Orders;
- (e) Notice to Clean, Test and/or Abate;
- (f) Suspension, revocation, or denial of permits or license;
- (g) Administrative penalties and fines;
- (h) Declaration of a Public Nuisance; and,
- (i) Civil and/or criminal court actions.

While these measures typically escalate in enforcement action, they are not required to be issued in the exact order presented here. City inspectors will apply or recommend any of the enforcement steps as appropriate according their best professional judgment and the guidelines of the Enforcement Response Plan. A discussion of these measures is provided below.

1. Verbal and/or written Warnings

A common initial method of requesting corrective action and obtaining compliance is a verbal or written warning to the facility official, construction site manager or other responsible party. Verbal warnings from the inspector are often sufficient to achieve correction of the violation, often while the inspector is present at the site. After notifying the responsible official of the violation, the inspector should document the violation and notification in the inspection file, and note any time frames given for correcting the problem or follow-up inspections needed. In judging the degree of severity, the City of Carlsbad inspector may also take into account any history of similar or repeated violations at the facility.

2. Notice of Violation

A written Notice of Violation is used when verbal or written warnings are not deemed sufficient to correct the violation or additional documentation is warranted. The written Notice of Violation describes the infraction that is to be corrected and the required response or time frame(s) for correction. The notice is issued to the responsible party, and a copy is placed in the active inspection file. If the violation is corrected to the satisfaction of the inspector, the inspector will document compliance in the inspection file.

3. Compliance Schedules

A compliance schedule may be issued to ensure that multiple violations or more complex violations requiring capital expenditures or improvements are corrected by specified deadlines.

4. Cease and Desist Orders or Stop Work Orders

A City inspector may issue an order to cease and desist a discharge, practice, or operation that is occurring or is likely to take place in violation of the City ordinance. The inspector may direct the responsible party to take appropriate remedial or preventive action to prevent the violation from recurring. Whenever any work is being done contrary to the provisions of the City ordinance, the City inspector may issue a written order that the work be stopped until further notice. This mechanism is the most commonly used enforcement tool for construction site inspectors.

5. Notice to Clean, Test and/or Abate

If the enforcement official or inspector finds any sediment, waste or pollutants on the sidewalk or a parcel of land that has potential to enter the City's storm water conveyance system in violation of the City ordinance, the inspector may issue a written notice to remove the material in a reasonable manner.

6. Suspension, Revocation, or Denial of Permits or Licenses

Violations of the City ordinance may be grounds for local permit or license denial, suspension, or revocation.

7. Administrative Penalties or Fines

Because violations vary in threat to water quality, City inspectors may consider utilizing storm water field citations for infractions or misdemeanors. Similar to traffic violations, the penalty for a storm water infraction can be relatively minor for a first offense. Repeated violations could result in escalating fines or misdemeanor charges.

8. Declaration of a Public Nuisance

Whenever an existing condition or a discharge into the storm water conveyance system violates the City ordinance, it is considered a threat to public health, safety, and welfare and may be declared a public nuisance. The inspector may follow appropriate procedures to recommend a declaration of a Public Nuisance by City Council in order to abate the nuisance discharge or condition.

9. Civil and/or Criminal Court Actions

As a final resort, the City of Carlsbad may use civil and or criminal court actions under the State Porter Cologne Water Quality Act or the Federal Clean Water Act, which may result in significant fines levied upon the non-compliant responsible parties.

Action #2 – Develop an Enforcement Response Plan to outline how each enforcement mechanism will be applied.

The City will develop an Enforcement Response Plan to outline procedures to identify, document, and respond to storm water violations. The plan will provide guidance for City inspectors in selecting initial and follow-up enforcement actions, identifying responsible staff, and specifying appropriate time frames for actions.

7.9 Reporting of Noncompliant Sites

7.9.1 Purpose and Permit Requirements

Purpose	The purpose of this section is to identify the process for reporting non-compliant construction sites to the San Diego Regional Water Quality Control Board.
NPDES Permit Order No. 2001- 01 Requirement(s)	<p>The Permit requirement under the Construction Component for Enforcement of Construction Sites is as follows:</p> <p>Section F.2.i</p> <p><i>Each Copermittee shall provide oral notification to the SDRWQCB of non-compliant sites that are determined to pose a threat to human or environmental health within its jurisdiction within 24 hours of the discovery of noncompliance, as required under Section R.1 (and B.6 of Attachment C) of this Order.</i></p> <p><i>Each Copermittee shall develop and submit criteria by which to evaluate events of non-compliance to determine whether they pose a threat to human or environmental health. These criteria shall be submitted in the Jurisdictional Urban Runoff Management Program Document and Annual Reports for SDRWQCB review.</i></p> <p><i>Such oral notification shall be followed up by a written report to be submitted to the SDRWQCB within 5 days of the incidence of non-compliance as required under Section R.1 (and B.6 of Attachment C) of this Order. Sites are considered non-compliant when one or more violations of local ordinances, permits, plans, or this Order exist on the site.</i></p>
Jurisdictional URM Requirements	<p>The Permit requirement under the Construction Component for Enforcement of Construction Sites is as follows:</p> <p>Section H.1.a.(1)(I)</p> <p><i>A description of how non-compliant sites will be identified and the process for notifying the SDRWQCB, including a list of current non-compliant sites.</i></p>
City Action Plan	<ol style="list-style-type: none">1) Define the process for identifying noncompliant sites by developing criteria to determine if a noncompliance presents a threat to storm water. Annually assess the evaluation criteria. A valid noncompliance industrial site will be reported to the San Diego Regional Water Quality Control Board (SDRWQCB).2) Develop a mechanism for reporting noncompliant industrial sites to the SDRWQCB.3) Develop a list of current noncompliant industrial sites.

7.9.2 Reporting of Noncompliant Sites Actions

Action #1 - Define the process for identifying noncompliant sites by developing criteria to determine if a noncompliance presents a threat to storm water. Annually assess the evaluation criteria. A valid noncompliance industrial site will be reported to the SDRWQCB.

The City of Carlsbad Public Works Director or designated representative shall provide oral notification to the SDRWQCB of non-compliant sites that are determined to pose a threat to human or environmental health within 24 hours of the determination of the health threat.

The City considers the following criteria during evaluation of an event producing non-compliance, whether from storm water or non-storm water discharges:

- Estimated area of erosion caused by discharge.
- Estimated sediment load discharged from site.
- Were toxic materials discharged from site.
- Proximity of site to sensitive water body (i.e. is discharge to ocean, creek, river, etc)
- Proximity of site to impaired water body (303(d) listed).
- Proximity of site to sensitive habitat/endangered species.
- Estimated volume of discharge.
- Proximity of site to public water supply (well head, monitoring wells)
- Beneficial uses for affected water bodies.
- If discharge to storm drain, condition of storm drain (clog, etc.)
- TSS concentration in discharge and turbidity.
- Other materials discharged from site (concrete washout, sanitary washes, etc).

The City of Carlsbad proposes to use the following questions to further determine if a noncompliance citation administered for programmatic or monitoring should be reported to the SDRWQCB. The intent is to discriminate between noncompliances that are strictly ministerial from those posing a valid threat to human health or the environment in relation to storm water quality and receiving water quality as defined by the anti-degradation policy. This evaluation covers the likelihood of unreasonable degradation of receiving water quality and complies with SWRCB Resolution No. 68-16 and the federal anti-degradation policy described in 40 CFR 131.12. The City of Carlsbad will apply other regulations as appropriate for impacts to human health and the environment that would not affect storm water or receiving water.

The questions are phrased where if an affirmative response is given for all of these questions, then noncompliance will be considered valid with the information from the above criteria. The noncompliance will be reported to the SDRWQCB using the mechanism described in Action #2. The emphasis of the criteria is to identify the application of Order No. 2001-01 or other applicable environmental regulations.

1. Was the noncompliance intentional?
2. Was the noncompliance due to negligence?
3. Was this noncompliance a repeated offense?
4. Does the noncompliance place doubt on the facility's "Good Faith" efforts in implementing the SWPPP and General Permit (if applicable) requirements?
5. Was the noncompliance due to routine activities?
6. Was the noncompliance due to a foreseen, planned, and controllable outside influence?
7. Would the noncompliance cause a potential degradation of receiving waters?
8. Does the noncompliance cause an actual degradation of receiving waters?

Action #2 - Develop a mechanism for reporting noncompliant industrial sites to the SDRWQCB.

Oral notification by telephone to the SDRWQCB within 24 hours of the discovery of the noncompliant industry will be conducted and documented in a telephone log.

Written follow-up notification within 5 days of the discovery of the noncompliant site will be sent via certified mail to the SDRWQCB.

Action #3 - Develop a list of noncompliant industrial sites.

The City of Carlsbad will develop list based on the criteria presented in Action # 1. This list will be developed based on complaint investigations and inspections of construction sites and submitted to the SDRWQCB in the City's annual JURMP report.

7.10 Education on Construction Activities

7.10.1 Purpose and Permit Requirements

Purpose	<p>The purpose of this Permit requirement is to educate municipal staff, project applicants, contractors, developers, property owners, and other responsible parties of the requirements for construction/grading activities.</p>
NPDES Permit Order No. 2001- 01 Requirement(s)	<p>The Permit requirement under the Construction Component for Education on Construction Activities is as follows:</p> <p>Section F.2.j.(1)</p> <p><u>Internal: Municipal Staff</u></p> <p><i>Each Copermittee shall implement an education program to ensure that its construction, building, and grading review staffs and inspectors have an understanding of:</i></p> <ol style="list-style-type: none"><i>Federal, state, and local water quality laws and regulations applicable to construction and grading activities.</i><i>The connection between construction activities and water quality impacts (i.e., impacts from land development and urbanization).</i><i>How erosion can be prevented.</i><i>How impacts to receiving water quality resulting from construction activities can be minimized (i.e., through implementation of various source control and structural BMPs).</i><i>Applicable topics listed in Section F.4. of this Order.</i> <p>Section F.2.j.(2)</p> <p><u>External: Project Applicants, Contractors, Developers, Property Owners, and other Responsible Parties</u></p> <p><i>Each Copermittee shall implement an education program to ensure that project applicants, contractors, developers, property owners, and other responsible parties have an understanding of the topics outlined in Section F.2.j.(1). above of this Order.</i></p>
Jurisdictional URMP Requirements	<p>The Permit requirement under the Construction Component for Education on Construction Activities is as follows:</p> <p>Section H.1.a.(1)(m)</p> <p><i>A description of the construction education program and how it will be implemented.</i></p>
City Action Plan	<ol style="list-style-type: none">1) Describe the construction education program for Municipal/Construction support Staff and how the program will be implemented.2) Describe the construction education program for external parties and how the program will be implemented.

7.10.2 Education on Construction Activities Actions

Action #1 - Describe the construction education program for Municipal /Construction support Staff and how the program will be implemented.

The City of Carlsbad has included the Education and Outreach efforts for the Construction Component as part of Section 9 of this Jurisdictional Urban Runoff Management Plan. Please refer to that section for details on education, training and outreach for both city staff training and, and external audiences (contractors, consultants, etc.). A summary is provided below.

The City of Carlsbad will implement an education program to ensure that its Municipal/Construction support Staff and inspectors have an understanding of:

- A. Federal, state, and local water quality laws and regulations applicable to construction and grading activities;
- B. The connection between construction activities and water quality impacts (i.e., impacts from land development and urbanization);
- C. How erosion can be prevented;
- D. How impacts to receiving water quality resulting from construction activities can be minimized (i.e., through implementation of various source control and structural BMPs); and
- E. Applicable topics listed in section F.4. of the Permit.

Information on construction requirements will be provided to employees as described in Section 9 of this JURMP. The extent of details will depend on the employees job function.

Action #2 - Describe the construction education program for external parties and how the program will be implemented.

The details of the Education Component are outlined in Section 9 of this JURMP. A summary of the program is provided below. At a minimum, the program will ensure that its Municipal/Construction support Staff and inspectors have an understanding of:

- A. Federal, state, and local water quality laws and regulations applicable to construction and grading activities;
- B. The connection between construction activities and water quality impacts (i.e., impacts from land development and urbanization);
- C. How erosion can be prevented;
- D. How impacts to receiving water quality resulting from construction activities can be minimized (i.e., through implementation of various source control and structural BMPs); and
- E. Applicable topics listed in section F.4. of the Permit.

Information on construction requirements will be provided to Project Applicants, Contractors, Developers, Property Owners, and other Responsible Parties as follows:

- On selected construction projects, the City of Carlsbad will provide face to face verbal instruction/training on the implementation of BMPs with property owner and/or construction supervisor;
- Fact Sheets and the ordinances will be available at the public counter in City Hall;

- The City of Carlsbad will coordinate/participate with other copermittees in regional workshops or other events to target the construction and development community.